PRELIMINARY DRAFT

Land Use and Resource Management Plan for the Primary Zone of the Delta

I INTRODUCTION

The Primary Zone of the Sacramento-San Joaquin Delta includes approximately 500,000 acres of waterways, levees and farmed lands extending over portions of five counties: Solano, Yolo, Sacramento, San Joaquin and Contra Costa. The rich peat soil in the central Delta and the mineral soils in the higher elevations support a strong agricultural economy. The Delta lands have access to the fresh waters of the 1,000 miles of rivers and sloughs lacing the region. These waterways provide habitat for many aquatic species and the uplands provide year-round and seasonal habitat for amphibians, reptiles, mammals, and birds, including several rare and endangered species. The area is extremely popular for water-oriented recreation including fishing, boating, and water-skiing.

Recognizing the threats to the Primary Zone of the Delta from potential urban and suburban encroachment and the need to protect the area for agriculture, wildlife habitat, and recreation uses, the California Legislature passed and the Governor signed into law on September 23, 1992, the Delta Protection Act of 1992 (SB 1866). The Act directs the Delta Protection Commission to prepare a comprehensive resource management plan for land uses within the Primary Zone of the Delta (Plan).

The planning conducted by the Delta Protection Commission involved preparation and public review of nine background reports: Environment; Utilities and Infrastructure; Land Use and Development; Water; Levees; Agriculture; Recreation and Access; Marine Patrol, Boater Education, and Safety Programs; and Implementation. These reports provided the information base for the Plan findings and policies, as well as allowing opportunities for public review and comment through circulation and public hearings before the Commission.

The goals of the Plan as set out in the Act are to "protect, maintain, and where possible, enhance and restore the overall quality of the Delta environment, including but not limited to agriculture, wildlife habitat, and recreational activities; assure orderly, balanced conservation and development of Delta land resources and improve flood protection by structural and nonstructural means to ensure an increased level of public health and safety." Also pursuant to the Act, to the extent that any of the requirements specified in this Land Use and Resource Management Plan are in conflict, nothing in this Plan shall deny the right of the landowner to continue the agricultural use of the land.

The Plan consists of three sections. Part I, the Introduction, describes the planning program and the Plan objectives. Part II provides Findings and includes the Plan's individual Elements. Policies, and Recommendations for more than one local government, or for State agency or special district action. Part III describes the program for implementing the Plan. Part IV is a map that which shows the boundary of the Primary and Secondary Zones of the Delta is attached to the end of this Plan.

Each element includes an introductory discussion that provides the context for the element's goals and policies. The introductory discussions provide findings, policies, and recommendations. Findings are derived from the information in the background reports. The findings form the framework of data from

which the <u>goals and</u> policies <u>of the individual elements</u> and recommendations are derived. Policies are the directions for action the local governments must embrace and support through amendments to <u>the local</u> General Plans, if necessary. <u>"The policies are intended to provide harmony Deltawide for local government actions. Recommendations are additional, optional directions for action for local government, for non-profit groups. State agencies, and others. It is important to note, however, that in the implementation of both the <u>goals and policies and recommendations</u> of this <u>pPlan</u>, the Act specifically prohibits the exercise of the power of eminent domain unless requested by the landowner.</u>

OVERVIEW

The Delta Protection Act of 1992 (Public Resources Code Section 29760 et. seq.) requires the Commission to prepare and adopt and thereafter review and maintain a comprehensive long-term resource management plan for land uses within the Primary Zone of the Delta ("resource management plan"). The resource management plan is to set forth a description of the needs and goals for the Delta and a statement of the policies, standards, and elements of the resources management plan. Within 180 days of the adoption of the resource management plan or any amendments by the Commission, all local governments, as defined in Public Resources Code Section 29725, shall submit to the Commission proposed amendments which will cause their general plans, as defined in Government Code Section 65300 et seq., to be consistent with respect to land located within the Primary Zone. The following regulations are the policies of the resource management plan. The regulations to not apply to other local agencies, as defined in Public Resources Code Section 29724, or to reclamation districts.

The term "shall" in these regulations is mandatory; the terms "may", "should", and "can" are advisory.

Note: In 2000, the policies of the Land Use and Resource Management Plan for the Primary Zone of the Delta were adopted as regulations [See Title 14, California Code of Regulations, Chapter 3. Regulations Governing Land Use and Resources Management in the Delta]. The regulations are printed as the policies of the Plan.

II PLAN ELEMENTS

EnvironmentNATURAL RESOURCES

The Delta is a unique geographic area in the State of California, a low-lying region of rich mineral and peat soils, composed of islands created largely by humans, as they diked and drained the prehistoric marshes of the region.

The lush wetland habitats surrounded by riparian woodlands have been replaced by agricultural lands, both cultivated and irrigated croplands, and irrigated and unirrigated pasture lands. Remnants of natural habitat are located largely along some sloughs and rivers and on small channel islands. Pockets of wooded or wetland habitat exist on some islands.

The aquatic habitats were historically brackish and home to both resident and migratory fish. Modern aquatic habitats are affected by flows released from upstream dams, seasonal drainage from agricultural lands, and year-round drainage from sources outside the Primary Zone, such as sewage treatment plants. Several large, freshwater lakes are located on the eastern edge of the Delta, providing year-round wetland habitat.

Species indigenous to the Delta evolved within an ecosystem that was much different than today. Many of the indigenous species have declined because of loss of habitat, changes in hydrologic processes, or other changes to the system. Some of these ecosystem changes over the past 150 years include:

- Loss of access to upstream habitat for anadromous fish from construction of dams
- Diking and draining of Delta lands to convert marshes to farms
- Urbanization
- Construction of levees that separate rivers from their floodplains and eliminate channel meandering and riparian habitat
- Invasion by non-native species
- Alterations in hydrology, particularly seasonal flow patterns
- Reduction in seasonal and annual variability in salinity
- Introduction of numerous toxic substances

Flow patterns in the Delta are governed by inflows, diversions, and tidal flows. The relative importance of these flows varies with season and location. In general, Delta inflows have decreased in winter-spring through impoundment behind dams and increased in summer through flow releases to support export pumping and control salinity in the Delta. That change in seasonal pattern has reduced the large floodflows that used to deliver sediment and rearrange the channel configuration (bathymetry) and has decreased salinity in the summer. This has made the water in the area fresher for longer periods, which favors introduced species, such as the waterweed Egeria densa, overbite clam, and largemouth bass.

Net—tidally averaged—flows depend on inflows from the rivers and export flows in the southern Delta. Sometimes the combination of inflows and exports causes "reverse flow," or a situation when flow moves upstream rather than downstream. These flows cause large numbers of young fish, including eggs and larvae, to be sent to the export facilities. In addition, some entrainment of these young fish, eggs, and larvae occurs even when the net flow is in the downstream direction.

The Delta provides substantial habitat for resident and migratory waterfowl and shorebirds. The abundance of these birds declined precipitously in the Delta because of land reclamation, but changes in cropping patterns have allowed populations of some species to increase.

The Delta supports approximately 55 fish species, about half of which are natives. Many of the native species have declined in abundance and in range, leading to the listing of several species under the California and/or federal Endangered Species Acts. Early species declines were caused by loss or isolation of physical habitat when the Delta islands were drained. Species declines that have occurred since most monitoring began in the 1960s through 1980s have been attributed to a variety of causes including changing climate; effects of toxic substances; alteration of habitat; introduction of species that consume, compete with, or alter the habitat of natives; water diversions/exports; and changes in hydrology.

In the past few years, the abundance of several pelagic (open water) fish species inhabiting the Delta, such as delta smelt and longfin smelt, have declined to record-low levels. The reasons for pelagic organism decline are multiple and are the subject of intense investigation. Pelagic species of the Delta

seem to be squeezed between poor conditions for food and water quality, losses to export pumping, and possibly other negative influences, such as toxins. Chinook salmon populations have also experience precipitous declines within the Delta.

Long-term trends for the ecosystem depend on the severity of climate change and the future physical structure and salinity of the Delta. Current trends for increasing temperature and a shift to an earlier runoff peak will favor some species over others. Chinook salmon, steelhead, and delta smelt are among those likely to suffer negative impacts of these changes. The planktonic species at the base of the food web are unlikely to be strongly affected by these changes. However, some other species may be strongly affected by the trend toward clearer water in the Delta and by changes in the abundance and distribution of introduced clams and waterweed.

At all levels of the ecosystem, native plants and animals are now competing with exotics. Of particular concern are the Asian clam, which is competing for phytoplankton at the bottom of the food chain, and popular introduced game fish, such as the Striped bass, which are declining in numbers and in health. The native winter-run Chinook salmon and Delta smelt are designated endangered and threatened, respectively.

Large mammals, such as bear and elk, which historically lived in and around the Delta have been eliminated. Aquatic mammals including beaver and otter still remain. Both year-round and migratory birds have adapted to the agricultural practices in the Delta, particularly the small grain fields which are flooded in fall and winter months. Migratory birds include ducks, geese, swans, cranes, and shorebirds. Hawks and eagles forage in the Delta fields. The Primary Zone, with its large open expanses of farmland, mosaic of small grain crop residues and shallow flooded fields, permitting wildlife to feed and rest, provides extremely high quality wildlife habitat. Hawks and eagles forage in the Delta fields; Swainson's Hawk is designated "threatened" by the Department of Fish and Game.

The geology of the region created this unique "delta". Sediments trapped inland of the rocky neck of the Carquinez Straits resulted in the creation of the 1,100 square mile area known as "the Delta". The Delta exists in a State known for earthquake faults; the probability of seismic activity remains constant. A zone of buried thrust faults is located along the western edge of the Delta.

The peat soils of the central and western Delta have oxidized in great part due to drainage. Losses of soil due primarily to such oxidation have resulted in subsidence of land surfaces of up to 20 feet. Original peat soil depths varied substantially from area to area and even within a given island. Current studies show the only effective way to stop subsidence is to reflood the peat soils. Subsidence has slowed to about one-third of an inch a year in many areas. About 60% of the lands in the Delta are designated prime agricultural lands.

The low elevations of the Delta, exacerbated by subsidence, result in a constant threat of flooding. Twice in each approximately 25 hour period the tides raise and lower the elevation of the Sacramento River about three feet. The threat of flooding is generally associated with periods of high winter rainfall and periods of rapid spring snow melt in the watersheds draining into the Delta. The most critical conditions occur when upstream dams are full and the resulting high rates of river flow combine with high tides

Goal

Preserve and protect the natural resources of the Delta, including soils. Promote protection of remnants of riparian habitat. Promote seasonal flooding and agriculture practices that on agricultural lands to

maximize wildlife use of the hundreds of thousands of acres of lands in the Delta. Promote levee maintenance and rehabilitation to preserve the land areas and channel configurations in the Delta.

Policies:

- P-1. The priority land use of areas of prime soil shall be agriculturally orientede. If commercial agriculture is no longer feasible due to subsidence or lack of adequate water supply or water quality, land uses which that protect other beneficial uses of Delta resources, and that which would not adversely affect agriculture on surrounding lands, or the viability or cost of levee maintenance, may be permitted. If temporarily taken out of agriculture production due to lack of adequate water supply or water quality, the land shall remain reinstateable to agriculturally-oriented uses production for the future.
- P-2. <u>Encourage a</u>Agricultural and land management practices <u>shall-that</u> minimize subsidence of peat soils. Local governments shall support studies of agricultural methods that minimize subsidence and shall assist in educating landowners and managers as to the value of utilizing these methods.
- P-3. Lands managed primarily for wildlife habitat shall-should be managed to provide several inter-related habitats, when appropriate. Delta-wide habitat needs should be addressed in development of any wildlife habitat plan. Appropriate programs, such as "Coordinated Resource Management and Planning" (Public Resources Code Section 9408(c)) and "Natural Community Conservation Planning" (Fish and Game Code Section 2800 et seq.) should ensure full participation by local government and property owner representatives.
- P-4. Support the non-native invasive species control measures being implemented by the California Department of Fish and Game, the California Department of Boating and Waterways, the State Water Resources Control Board, and the Central Valley and San Francisco Bay Regional Water Ouality Control Boards, which include controlling the arrival of new species into the Delta.
- P-5. Preserve and protect the viability of agricultural areas by including an adequate financial mechanism in any planned conversion of agricultural lands to wildlife habitat. The financial mechanism shall specifically offset the loss of local government and special district revenues necessary to support public services and infrastructure.
- P-6. Implement appropriate buffers within lands converted to wildlife habitat to ensure the ongoing agricultural operations adjacent to the converted lands remain viable.
- P-7. Incorporate, to the maximum extent feasible, suitable and appropriate wildlife protection, restoration and enhancement on existing and future publicly-owned land as part of a Delta-wide plan for habitat management.
- P-8. Encourage the management of suitable agricultural lands to maximize habitat values for migratory birds and other wildlife. Appropriate incentives, such as conservation easements, should be provided to protect this seasonal habitat through donation or through purchase.
- P-9. Preserve and protect lands currently managed for wildlife habitat, such as private duck clubs or publicly-owned wildlife areas, from destruction from inundation.
- P-10. Promote ecological and agricultural tourism in order to preserve the cultural values and economic vitality that reflect the history, natural heritage and human resources of the delta, including the establishment of natural heritage area designations.

<u>er beneficial use</u>	s of Delta resource	<u>es.</u>		

UTILITIES AND INFRASTRUCTURE

Due to the <u>Sacramento-San Joaquin</u> Delta's location between major population areas, its unique resources, especially water and natural gas, and its flat terrain and general lack of development, the Delta has high value as a utility and transportation corridor.

Utilities located in the <u>Sacramento-San Joaquin</u> Delta include: radio and television transmission towers; electrical transmission lines including Pacific Gas and Electric, <u>Sacramento Municipal Utility District</u>, and Western Area Power Administration lines; natural gas pipelines, serving local gas fields and regional pipelines; petroleum transportation pipelines; and water transportation canals and pipelines transporting water from the Delta to regional users and transporting water through the Delta to the Bay Area.

The regional electrical transmission lines carry power within California as well as between regions of the western United States. More than 500 miles of transmission lines and more than 60 substations lie within the Delta boundaries. Several electrical peaking plants surrounding the Delta depend on these transmission lines. Within the larger Delta-Suisun Marsh area are approximately 240 operation gas wells. Natural gas pipelines serve local gas fields and regional pipelines. PG&E's underground natural gas storage area under McDonald Island provides up to one-third of the peak natural gas supply for its service area. Pipelines carry gasoline and aviation fuel across the Delta from Bay Area refineries to depots in Sacramento and Stockton for distribution to Northern California and Nevada. They provide approximately 50 percent of the transportation fuel used in that region. The Mokelumne Aqueduct, consisting of three pipelines, is the main municipal water conveyance facility for 1.3 million people in the East Bay Municipal Utility District. The aqueduct crosses five Delta islands/tracts (Orwood Tract, Woodward Island, Jones Tract, Roberts Island, and Sargent-Barnhart Tract) protected by levees.

Buried pipelines within rights of way appear to generally have lesser impacts on wildlife movements or land uses than aboveground facilities. The aboveground facilities, such as pipelines, canals, and transmission lines do impact wildlife movements, reduce availability of valuable habitat, and result in direct loss of birds killed by striking transmission lines.

Local governments regulate the utilities that serve Delta residents and visitors including potable water, sewage disposal, and solid waste disposal. Most potable water is obtained from groundwater through local wells. Most wastewater from homes and businesses is treated in on-site septic tanks. Some of the larger communities and developments have self-contained wastewater treatment facilities. Communities outside the Primary Zone do and propose to continue to release treated wastewater into Delta waterways, onto constructed wetlands, or onto agricultural lands. Most solid waste generated in the Delta is disposed of at facilities outside the area. Recycling is not readily available for Delta residents; in the Delta, agricultural waste is typically disposed of on site.

Natural gas remains an important natural resource extracted from the Delta. PG&E maintains a large underground storage site under McDonald Island.

Transportation systems traversing around and through the Delta include several railroads and freeways, state highways, and county roads. Three interstate freeways (I-5, I-80, and I-580) are major transportation and trucking routes that pass the periphery of the Delta. The three major state highways in the Delta (SR 4, SR 12, and SR 160) are typically two lanes, sometimes built on top of levees. Originally meant for lower traffic volumes at moderate speeds, the state highways are now heavily used for regional trucking, recreational access, and commuting. County roads generally follow the levees. Five auto ferries in the Delta allow public access, but three of them lead to islands that are private property. There are more than 50 bridges, including approximately 30 drawbridges, spanning the navigable channels in the Delta. Bridges impact vessel traffic on the waterways; some bridges rarely open requiring boats to travel

alternate waterways. Some bridges open regularly, impacting surface traffic and creating possible delays in emergency response.

Many bridges connect island developments; five islands are served only by ferry. Regional rail traffic between the Bay Area and the Central Valley passes through the Delta. The Amtrak San Joaquin route from Bakersfield to Sacramento/Oakland, which crosses through the Delta, had nearly 800,000 riders in 2006. In addition, companies such as the Sierra Northern Railway use existing short-line tracks for interregional freight and passenger services.

Two major ports lie north and east of the Primary Zone, the Ports of Sacramento and Stockton, respectively. The Stockton and Sacramento Deep Water Ship Channels were constructed in 1933 and 1963, respectively. The Stockton channel is 35 feet deep and can handle 55,000-ton class vessels with full loads. More than 300 ships and barges used the channel in 2005. The Sacramento ship channel is 30 feet deep. Both ports are likely to expand in the future, which would result in an increase in ship and barge traffic through the Delta. The shipping channels were constructed the late 1920's (Stockton) and 1950's (Sacramento). Several million tons of diversified products are shipped through the Delta each year.

Airports in the Delta are limited to small facilities serving individual land-owners and agriculture-serving businesses.

Goal

Protect the <u>Sacramento-San Joaquin</u> Delta from excessive construction of utilities and infrastructure facilities, including those that support uses and development outside the Delta. Where construction of new utility and infrastructure facilities is appropriate, ensure the impacts of such new construction on the integrity of levees, wildlife, and agriculture are minimized.

Policies

- P-1. Locate new transmission lines and utilities Impacts associated with construction of transmission lines and utilities can be mitigated by locating new construction in existing utility or transportation corridors, or along property lines, in order to minimize and by minimizing construction impacts within the Delta. Before new transmission lines are constructed, the utility should determine if an existing line has available capacity. To minimize impacts on agricultural practices, utility lines shall follow edges of fields. Pipelines in utility corridors or existing rights-of-way shall be buried to avoid adverse impacts to terrestrial wildlife. Pipelines crossing agricultural areas shall be buried deep enough to avoid conflicts with normal agricultural or construction activities. Utilities shall be designed and constructed to minimize any detrimental effect on levee integrity or maintenance.
- P-2. New Ensure that new houses built in the Delta agricultural areas <u>but outside of Delta communities shall</u> continue to be served by independent potable water and wastewater treatment facilities. Agricultural uses that require waste water treatment <u>Uses which attract a substantial number of people to one area, including any expansions to the Delta communities, recreational facilities or <u>businesses</u>, shall provide adequate infrastructure improvements or pay to expand existing facilities, and not overburden the existing limited community resources. The appropriate governing body shall <u>ensure that n</u>New or expanded construction of wastewater disposal systems <u>shall meet the ensure</u> highest feasible standards/<u>conditions and are met, are not growth inducingas determined by the local governing body</u>. Independent treatment facilities shall be monitored to ensure no cumulative adverse impact to groundwater supplies.</u>

- P-3. Ensure that nNew municipal sewage treatment facilities (including storage ponds) and new areas for disposal of municipal sewage effluent and sewage sludge to support development or business outside of the Delta Primary Zone are not shall not be located within the Delta Primary Zone. The Rio Vista project, as described in the adopted Final Environmental Impact Report for such project, and the Ironhouse Sanitary District use of Jersey Island for disposal of treated wastewater and biosolids are exempt from this policy.
- P-4. High groundwater tables and subsiding soil make the Delta an inappropriate location for solid waste disposal. Encourage Generation of waste shall be minimized through recycling programs for metals, glass, paper, cardboard, and organic materials in order to minimize waste generation. Recycling facilities depots for these materials should shall be located in central locations centralized to serve Delta residents, visitors, and businesses. High groundwater tables and subsiding soil make the Delta an inappropriate location for solid waste disposal.
- P-5. <u>Maintain rSurface transportation in the Delta can be dangerous and congested.</u> Roads within
 the Delta shall be maintained to serve the existing agricultural uses and supporting commercial uses,
 recreational users, and Delta residents. Where possible, commuter traffic and through traffic should be
 directed to surrounding highways and freeways, or minimized through programs which promote
 carpools, buses or trainsdiscouraged. Promote 'traffic calming' measures when determined feasible.
- P-6. Allow air transportation in the Delta shall be allowed to continue to serve Delta residents and
 agriculture-related businesses. Due to subsidence, transmission lines, high winds, fog, and high raptor
 and waterfowl use, the Primary Zone is not an appropriate location for new or expanded general
 aviation airports.
- P-7. Operation of draw and swing bridges shall balance needs of land and water traffic.
 Commercial vessels and emergency road traffic shall have right of way over other traffic Encourage the provision of infrastructure for new water, recreational, and scientific research facilities, as cited in the Land Use Element.

LAND USE

The patterns of settlement in the Delta reflect the history of immigration into the State in the late 19th century. The Delta settlement pattern was historically, and remains to this day, closely associated with the rivers, sloughs, and waterways, and the agricultural land use. One incorporated city, Isleton and portions of Stockton, Rio Vista, Antioch, Oakley, Sacramento, West Sacramento, Elk Grove, Tracy, Lathrop and Pittsburg, are located within or just outside of exist in the Secondary Zone. Unincorporated communities towns lielying along the Sacramento River in the Primary Zone including: Clarksburg, Courtland, Hood, Locke, Walnut Grove, and Ryde. The towns served as social and service centers for the surrounding farms and historically served as shipping sites for products. These rural communities reflect the diverse heritage of the Delta and the independence of country living.

The five Delta counties (Solano, Yolo, Sacramento, San Joaquin, and Contra Costa) designate Primary Zone lands for agriculture or special Delta resources in their respective General Plans. The zoning codes allow a variety of uses in the Primary Zone: agriculture and agriculturally-oriented uses; outdoor recreation; wildlife habitat; public facilities; and limited areas for commercial, industrial, and rural residential development. The parcel sizes specified in the General Plans and zoning codes range from 160 to 5, with most of the Primary Zone in the 80 to 20 acre minimum parcel sizes.

The two Delta ports, Sacramento and Stockton, own hundreds of acres of land along their respective shipping channels. Some of these lands are used for dredge materials disposal; some have been or will be used for mitigation sites to create new wetland habitat to offset losses suffered in construction or operation of the shipping channels.

Sherman Island, Jersey Island, Twitchell Island, Staten Island, and the McCormack-Williamson Tract are held as conservation lands, currently operated as farmlands. Since 1990, urban and other land uses have gained substantial acreage while agricultural land use has declined. Other land uses include conservation areas, low-density rural developments, natural areas not suitable for livestock grazing, and other non-agricultural areas.

The periphery of the Delta is undergoing rapid urbanization associated with substantial population growth. Current and future population growth increases the demand for developable land, particularly in areas near the Bay Area, Stockton, and Sacramento. This demand results in the conversion of open space, primarily agricultural land, to residential and commercial uses. Estimates prepared by State Reclamation Board staff indicate that as many as 130,000 new homes could be constructed within the legal Delta within the next decade. The population on Delta islands and tracts is expected to grow from about 26,000 in 2000 to about 67,000 in 2030.

Acquisition of farmed land, and subsequent retirement of that land, affects the economic base for farm support industries; the economic base for community businesses that rely on patronage from citizens working in farm or farm support industries; the tax and assessment base for special districts, county, and State; and existing wildlife use patterns which have adapted to agricultural land use patterns. In the Primary Zone, County General Plans and zoning ordinances all designate the Primary Zone primarily for agriculture. Within the agricultural zones, recreation, wildlife habitat, and nature preserves can be approved. The minimum parcel sizes vary within the five counties ranging from five acre minimum parcels (Contra Costa and Yolo Counties) to 160 acre minimum parcels (Solano County: non-irrigated and Yolo County: non-irrigated and under Williamson Act contract). Some Counties link minimum parcel size to soil type (Sacramento County) and some to "farmable unit" (Solano County). These variations show the difficulty in developing a universal definition or minimum parcel size to protect lands designated Agriculture in the General Plans.

This Plan seeks to retain the existing land use patterns in the Primary Zone—extensive agriculture lands serviced by the existing communities. While agricultural support facilities can be constructed in the agricultural areas, other future growth and development should be directed to the sites in the existing communities which were so designated as of January 1, 1992.

Significant acreage in the Primary Zone have been purchased in the last few years by state, federal, and non-profit agencies for enhancement and management as wildlife habitat. In addition, the Ports of Sacramento and Stockton own several thousand acres along their shipping channels. The State Department of Parks and Recreation owns several hundred acres of land and several thousand more of water for recreational purposes. The Department of Water Resources (DWR) has announced its intention to acquire both Sherman and Twitchell Islands, totaling 13,500 acres to protect the integrity of the levee system, develop wildlife habitat, and to control soil oxidation and subsidence. In addition, DWR owns Clifton Court Forebay and other lands associated with the State Water Project. Federal entities own land on the tip of Grand Island and near the Delta Cross Channel.

Changes in land use from agriculture are proposed on several islands covering several thousand acres. Both Twitchell and Sherman Island may be converted to year-round wildlife habitat. Stone Lakes Wildlife Refuge will acquire some lands for conversion to wildlife habitat. Medford Island is now a mitigation bank, managed for both agriculture and wildlife habitat. Prospect Island may be converted to wildlife habitat. The proposed Delta Wetlands project would convert four islands totaling 20,000 acres into two reservoirs and two wildlife habitat areas. A 3,000 acre area within the Yolo Bypass will be converted from agriculture to year-round wetland. Other projects propose Primary Zone lands be acquired for upland disposal of treated wastewater and biosolids, and for mitigation of environmental impacts.

Goal

Protect the unique character and qualities of the Primary Zone by preserving the cultural heritage and strong agricultural base of the Primary Zone. Direct new <u>non-agriculturally oriented</u> residential, commercial, and industrial development within the existing <u>communities unincorporated towns (Walnut Grove, Clarksburg, Courtland, Hood, Locke, and Ryde) as currently designated and where appropriate services are available.</u>

Policies

- P-1. The rich cultural heritage and strong agricultural base of the Delta shall be preserved and
 recognized in public/private facilities, such as museums, recreational trails, community parks, farm
 stands, community centers, and water access facilities within the Delta-within the existing
 communities.
- P-2. Local government general plans, as defined in Government Code Section 65300 et seq., and zoning codes shall continue to strongly promote and facilitate agriculture and agriculturally-supporting commercial and industrial uses as the primary land uses in the Primary Zone; recreation land uses shall be supported in appropriate locations and where the recreation uses do not conflict with agricultural land uses or other beneficial uses, such as waterside habitat. County plans and ordinances may support transfer of development rights, lot splits with no increase in density, and elustering to support long-term agricultural viability and open space values of the Primary Zone. Clustering is intended to support efficient use of agricultural lands, not to support new urban development in the Primary Zone. Local governments shall specifically indicate when, how, and why these options would be allowed in the Primary Zone.

- P-3. Option 1: New non-agriculturally oriented residential, recreational, commercial, or industrial development shall ensure that appropriate buffer areas are provided by those proposing new development to prevent conflicts between any proposed use and existing agricultural use. Buffers shall adequately protect integrity of land for existing and future agricultural uses. Appropriate buffer setbacks shall be a minimum of 500 feet, and beyond that distance, the setback determination shall be based on the expertise of Buffers may include berms and vegetation, as well as setbacks of 500 to 1,000 feet. local Agricultural Commissioners.
- P-3. P-3. Option 2: New non-agriculturally oriented residential, recreational, commercial, or industrial development shall ensure that appropriate buffer areas are provided by those proposing new development to prevent conflicts between any proposed use and existing agricultural use. Buffers shall adequately protect integrity of land for existing and future agricultural uses. Buffers may include berms and vegetation, as well as setbacks of 500 to 1,000 feet. Appropriate buffer setbacks shall be established by local Agricultural Commissioners based on applicable general plan policies and criteria included in Right-to-Farm Ordinances adopted by local jurisdictions.
- P-4. Option 1: New non-agricultural residential development shall be located within the existing
 unincorporated towns in the Primary Zone (Walnut Grove, Clarksburg, Courtland, Hood, Locke, and
 Ryde).
- P-4. Option 2: New non-agricultural residential development, if needed, shall be located within
 the existing unincorporated towns in the Primary Zone (Walnut Grove, Clarksburg, Courtland, Hood,
 Locke, and Ryde) communities where support infrastructure and flood protection are already
 provided.
- P-4. Option 3: New non-agricultural residential development shall be located within the existing
 unincorporated towns in the Primary Zone (Walnut Grove, Clarksburg, Courtland, Hood, Locke, and
 Ryde) where support infrastructure and flood protection will be provided prior to the issuance of
 building permits.
- P-5. Local government general plans shall address criteria under which general plan amendments in the Primary Zone will be evaluated under Public Resources Code Section 29763.5. Proposed amendments to local government general plans for areas in the Primary Zone shall be evaluated in terms of consistency of the overall goals and program of the Delta Protection Commission.
- P-6. Allow water reservoirs that are consistent with the goals of this Plan. Subsidence control shall be a key factor in evaluating land use proposals.
- P-7. New sStructures shall be set back from levees and areas which may be needed for future levee expansion consistent with local reclamation district regulations and the requirements to be identified in the California Department of Water Resources Central Valley Flood Control Plan, required by SB 5 to be prepared by January 1, 2012.
- P-8. Local government policies regarding mitigation of adverse environmental impacts under the California Environmental Quality Act may allow mitigation beyond county boundaries, if acceptable to reviewing fish and wildlife agencies and in consultation with recipient jurisdiction, for example in approved mitigation banks. Mitigation in the Primary Zone for loss of agricultural lands in the Secondary Zone may be appropriate if the mitigation program supports continued farming in the Primary Zone. California Government Code Section 51256.3 (Assembly Bill 797) specifically allows an agricultural conservation easement located within the primary or secondary zone of the Delta to be related to Williamson Act contract rescissions in any other portion of the secondary zone without respect to County boundary limitations.

- P-9. The implementation of the policies contained in the resource management plan shall not be achieved through the exercise of the power of eminent domain unless requested by the landowner.
- P-10. Maintain spoil sites for dredge material from channels within the Delta and discourage the conversion of existing spoil sites to other uses, as appropriate.
- P-11. Local governments may develop programs to cluster agriculture-dependent residential units or transfer development rights (TDRs) to off-site locations. Clustering on a single parcel would be accompanied by conditions to preserve agricultural use and open space values on the balance of the property. TDRs may involve transfers from farms to unincorporated towns or to sites out of the Primary Zone.
- P-12. Local governments that pursue clustering or transfer of development rights shall proceed with adoption procedures to implement such programs as part of the local government implementation of the resource management plan consistent with zoning in place on January 1, 1992.
- P-13. Encourage a critical mass of farms, agriculturally-related businesses and supporting infrastructure to ensure the economic vitality of agriculture within the Delta.
- P-14. Support the implementation of appropriately-located agricultural labor camps that are ancillary to agricultural operations and are constructed consistent with the requirements of local building codes.
- P-15. Promote opportunities for establishing National Heritage Areas consistent with other applicable policies included in this Plan.

AGRICULTURE

Delta agricultural lands were "reclaimed" through construction of levees and drainage of the marshy islands of the area. In less than 100 years, from 1850 to 1930, hundreds of thousands of acres of land went into agricultural production. The farmers and landowners represented a cross section of the new Americans-- Slavs, Dutch, German, English, and others. Many groups of immigrants first labored in the fields, then went on to become landowners or tenant farmers including Portuguese, Chinese, Japanese, Filipinos, and Hindus.

Early crops were grains, and fruits and vegetables marketed in the nearby cities. Early specialty crops included wheat, barley, beans, and potatoes. Later asparagus, sugar beets, tomatoes, and celery grew in popularity. Currently, the Delta counties raise a variety of crops including grains, fruits, field crops, nuts, seeds, pasture and alfalfa, and vegetables.

In the recent past, thousands of acres of agricultural lands were developed for residential and other urban uses. Between 1976-1990 and 19932004, about 21,60040,000 acres of agricultural land was converted to urban and conservation uses in the Deltain the Secondary Zone of the Delta were developed. Of the 21,600 acres, about 5,800 acres were orchards. The biggest change in the Primary Zone in that period in was the planting of about 4,500 acres of new orchards and vineyards. However, the 14-oss of steady water supplies for Valley farmers will tend to make Delta lands with their riparian water rights more valuable for agriculture. New markets to sell crops and new crops, including the conversion of crops to fuel burn as energy sources, will continue to keep agriculture an important land use in the Delta and California.

Agricultural lands within the Delta are highly productive and well suited for ongoing agricultural operations, as evidenced by the well-established wine growing regions, the islands that are mapped out of the 100-year flood zone, the deep well drained soils, the areas where permanent trees and vines are planted, the presence of state of the art reclamation districts that maintain the levees, the maintenance of water quality at the highest levels, the outstanding tomato yields, and the recognized superior quality of alfalfa grown in the Delta.

Local governments have certain limited regulatory authority over agricultural lands, including minimum parcel sizes. While each of the five Delta counties has different minimum parcel sizes, each County clearly delineates the Delta lands for long-term agricultural use. Local governments use "land use tools" such as an agricultural element in the General Plan, adoption of an urban limit line, buffers between agriculture and other approved uses, adoption of a Right to Farm ordinance, controls over subdivisions of agricultural lands, limitations on land uses allowable in the agricultural zone, limitations on changing General Plan designations, acquisition of conservation easements, transfer of development rights, and full support of Williamson Act programs.

Conflicts between agricultural activities and new residential, commercial, industrial, and recreational uses create long-term conflicts, which have a deleterious impact on agriculture. Complaints by non-farmers include: noise, dust, odors, flies, mosquitoes, aerial applications of fertilizer, pesticide and herbicide, night activity, and other aspects of normal agricultural activity. Complaints by farmers include trash, vandalism, increased traffic, loss of agricultural land, and dust.

Agricultural lands provide rich seasonal wildlife habitat. Thousands of acres of agricultural lands are flooded after harvest and provide feeding and resting areas for local and migratory birds and other wildlife. Development of a management plan for seasonal flooding helps maximize the wildlife values and lessen opportunities for agricultural pests.

Agriculture in the Delta evolves as farming practices, market opportunities, and government programs change. The availability of water makes the Delta a unique geographical region for agriculture. Future agricultural practices may require construction of additional infrastructure to accommodate more intensive agricultural operations.

Goal

To support long-term viability of commercial agriculture and to discourage inappropriate development of agricultural lands.

Policies

- P-1. Support and encourage commercial agriculture in the Delta shall be supported and encouraged as a key element in the State's economy and in providing the food supply needed to sustain the increasing population of the State, the Nation, and the world. Also, support agricultural tourism and value-added agricultural production as a means of maintaining the commercial agricultural economy of the Delta.
- P-2. Local governments, as defined in Public Resources Code Section 29725, shall identify the unique qualities of the Delta which make it well suited for agriculture. These qualities include: When possible, conversion of landf to non-agriculturally-oriented uses should occur first where productivity is lowest, and then preserve and promote the conservation of agricultural lands that have rich soil, ample and reliable supplies of high quality water suitable for irrigation, a long growing season and amild climate, and proximity to packaging and shipping infrastructure. The unique physical characteristics of the Delta also require that agricultural landowners participate in maintaining extensive levee systems, providinge flood control, and havinge adequate drainage to allow the lands to be farmed.
- P-3. Promote recognition of the Delta as a place by educating Education of the local populations about the value and rich agricultural heritage of agriculture and ongoing value of maintaining a healthy agricultural economy in the State and in the Delta shall be continued and expanded.
- •P-4. Local governments shall support long-term viability of commercial agriculture in the Delta because of its economic and environmental importance to the State and local communities.
- P-5. Support <u>sustainable agricultural</u> <u>shall be given to current and alternative</u> <u>programs that maintain and increase crop production levels and agricultural income in accordance with market demands, including but not limited to wildlife-friendly farming, conservation tillage and non-tillage. (Section 29703) help to minimize the need for costly production inputs such as fertilizers, pesticides, and herbicides as long as crop production levels and agricultural income can be maintained. Improving crop production and agricultural income is vital to the success of Delta agriculture.
 </u>
- P-56. Each local government shall continue to Encourage implementation of the necessary plans and ordinances to: maximize agricultural parcel size; reduce subdivision of agricultural lands; protect ordinary agriculture and relatedal activities; protect agricultural land from conversion to other non-agriculturally-oriented uses; and clearly define areas in that jurisdiction where urban land uses are appropriate and where agriculturally-oriented land uses are appropriate. An optimum package of regulatory and incentive programs would include: (1) an urban limit line; (2) minimum parcel size consistent with local agricultural practices and needs; (3) strict subdivision regulations regarding subdivision of agricultural lands to ensure that subdivided lands will continue to contain in agriculturallye-oriented land uses; (4) delete from zoning ordinances "other" land uses which are not

compatible the agriculture; (5) require adequate buffers between agricultural and non-agricultural land uses particularly residential development outside but adjacent to the Primary Zone; (65) an agriculture element of the general plan; (76) a right-to-farm ordinance; and (87) a conservation easement program.

- P-67. ELocal governments shall encourage acquisition of agricultural conservation easements as mitigation for projects within each county, or through public or private funds obtained to protect agricultural and open space values, and habitat value that is associated with agricultural operations.
 Encourage transfer of development rights within land holdings, from parcel to parcel within the Delta, and where appropriate, to sites outside the Delta. Promote use of environmental mitigation in agricultural areas only when it is consistent and compatible with ongoing agricultural operations and when developed in appropriate locations designated on a countywide or Deltawide habitat management plan.
- P-78. Local governments shall eEncourage management of agricultural lands which maximize wildlife habitat seasonally and year-round, through techniques such as sequential flooding in fall and winter flooding, leaving crop residue, creation of mosaic of small grains and flooded areas, wildlife friendly farming, controlling predators, controlling poaching, controlling public access, and others.
- P-89. Local governments may continue to rRetain agricultural zoning and minimum parcel sizes
 as described in zoning codes in place January 1, 1992. Where minimum parcel size is less than 40
 acres, local governments shall describe how smaller parcel sizes will support long term viability of
 commercial agriculture in the Primary Zone. This policy shall not be construed to require the rezoning of subminimum parcels.

•P-10.

- o(i) Local governments may develop programs to cluster agriculture-dependent residential units or transfer development rights (TDRs) to off-site locations. Clustering on a single farm would be for family members or employees and would not exceed maximum number of units allowed under existing zoning as of January 1, 1992. Clustering would be accompanied by conditions to preserve agricultural use and open space values on the balance of the property. TDRs may involve transfers from farms to Primary Zone communities with adequate flood protection to protect residential use, or to sites out of the Primary Zone.
- o(ii) Local governments that pursue clustering or transfer of development rights shall proceed with adoption procedures to implement such programs as part of the local government implementation of the resource management plan.
- •(iii) Where portions of cities are located within the Primary Zone, cities shall indicate zoning which was in place on January 1, 1992. Future changes to city general plans or zoning ordinances shall conform to the resource management plan.

WATER

In California, rainfall runoff and snowmelt are captured in reservoirs to redistribute to urban and agricultural customers and for environmental uses. About 75% of the State's water originates north of Sacramento; and about 75% of the State's water needs occur south of Sacramento.

Water bound for distribution through both the State Water Project (SWP) and the federal Central Valley Project (CVP) is taken from the south Delta. In addition, water to serve some Bay Area urban users is taken from the Delta. The SWP State project has contracts to divert export up to 4.2 million acre feet per year from the Delta, which supplies primarily urban uses but also supplies agricultural use south of the Delta. The and the CVP has contracts to divert federal project another 3.3 million acre feet per year, which supplies primarily agricultural land south of the Delta but also supplies urban areas and wildlife refuges. The projects generally are not able to deliver their full contract amounts because the projects are also operated for Delta water quality requirements and fish protections. On average, the projects together export about 5 million acre feet annually.

The federal C.W. "Bill" Jones Pumping Plant (formerly the Tracy Pumping Plant) can export about 4,600 cubic feet per second (cfs). The SWP Banks Pumping Plant has a physical export capacity of 10,300 cfs, but is permitted to divert only up to 6,680 cfs from the Delta into the pumping plant's Clifton Court Forebay. The fish protection facilities at these state and federal pumping plants are not state-of-the-art.

Of the water in the two developed water systems, about 83% is used for agriculture and about 17% is for "urban" uses. About two-thirds of the State's population gets at least a portion of its drinking water from the Delta. In addition, Delta farmers also have rights to irrigate with water taken directly from Delta sloughs and channels.

Because the Delta drains the Sacramento River and San Joaquin River watersheds, storm runoff and waste discharges from upstream and adjacent areas enter into the Delta waterways and cause water quality problems. Low-flow years generally carry higher concentrations of waste discharges and agricultural runoff and drainage than do wet years.

Some treated municipal and industrial wastewater, untreated urban storm water, and agricultural runoff and drainage enter the Delta directly. Other urban and agricultural discharges from upstream in the watershed enter the Delta along with the river flows. Seepage onto Delta islands from adjacent channels and drainage from the agricultural lands are released back to the Delta channels at hundreds of locations.

The Central Valley Regional Water Quality Control Board has identified the Delta as impaired by a number of pollutants including pesticides, low dissolved oxygen, electrical conductivity (salinity), and mercury. Delta fish have elevated levels of methylmercury, which poses a risk to humans and wildlife that eat the fish on a regular basis. The board has adopted a threshold called a total maximum daily load (TMDL) for dissolved oxygen and is developing a TMDL for methylmercury in the Delta.

The daily tidal cycles and the San Joaquin River contribute most of the salinity to the Delta. During periods of high Delta inflows, salinity is low; during periods of low Delta inflows, the salinity level rises. Salinity in the Delta is managed by a mix of releases from upstream reservoirs, Cross Channel Gate operations, Delta outflow, and exports from the Delta. The Delta is governed by water quality standards for municipal and industrial uses, agricultural uses, and fish and wildlife. The combination of organic matter (decaying vegetation), bromide in the seawater, and disinfectants used in water treatment plants

produce disinfection byproducts that may pose heath risks. Different disinfectants produce different types or amounts of disinfection byproducts including trihalomethanes, haloacetic acids, bromate, and chlorite.

Water quality in the Delta is regulated by the Regional Water Quality Control Boards through permit review of "point" discharges, such as discharges of treated water from sewage treatment plants and discharges to land. Water quality concerns related to drinking water include salinity intrusion, wastewater discharges, agricultural drainage water, trihalomethane precursor formation, and untreated stormdrain water.

The State Water Resources Control Board and the Regional Boards also designate beneficial uses of the State's waters. In the Delta, beneficial uses include: municipal and domestic supply; agriculture; industry; groundwater recharge; navigation; recreation; wildlife habitat; fish migration and spawning; and preservation of rare and endangered species.

During low flow and drought conditions, increased salinity of water of the western Delta can have a detrimental effect on agriculture in the area as well as the quality of drinking water supplies.

Water is being applied to some Delta lands to restore wetland habitats. This includes some areas proposed for permanent wetland status and thousands of acres of seasonally-flooded agricultural lands. Application of water can also result in enhanced habitat for mosquitoes, a recognized pest and health hazard.

Goal

Protect <u>and enhance</u> long-term water quality in the Delta for agriculture, municipal, industrial, water-contact recreation, and fish and wildlife habitat uses, as well as all other designated beneficial uses.

Policies

- P-1. Appropriate State and federal agencies shall be strongly encouraged to manage salinity in Delta waters, as well as the timing and quantity of Delta water inflows and outflows, appropriately to allow full agricultural use of Delta irrigated agricultural lands, to provide habitat for aquatic life, and to meet State water quality requirements for drinking water, and municipal and industrial uses. Local governments shall ensure that salinity in Delta waters allows full agricultural use of Delta agricultural lands, provide habitat for aquatic life, and meet requirements for drinking water and industrial uses.
- P-2. Local governments shall ensure that design, construction, and management of any flooding program to provide seasonal wildlife and aquatic habitat on agricultural lands, duck club lands and additional seasonal and tidal wetlands, shall incorporate "best management practices" to minimize vectors including mosquito breeding opportunities and shall be coordinated with the local vector control districts. (Each of the four vector control districts in the Delta provides specific wetland/mosquito management criteria to landowners within their district.)
- P-3. Water agencies at local, State, and federal levels shall work together to ensure that adequate
 Delta water quality standards are set and met and that beneficial uses of State waters are protected
 consistent with the CALFED (see Water Code Section 12310 (f)) Record of Decision dated August 8,
 2000.
- P-4. Design and develop habitat restoration programs to minimize existing levels of mercury biomethylization within the Delta. Habitat restoration programs shall be consistent with the Delta mercury TMDL, as adopted by the State Water Resources Control Board.

- P-5. Option 1: Continue to have Delta waterways serve as a primary transportation system moving water to and from the State's natural and developed water systems.
- P-5. Option 2: Continue to have Delta waterways serve as a transportation system moving water to and from the State's natural and developed water systems.
- P-6. Ensure that Delta water rights and water contracts are respected and protected against unilateral changes, including area of origin water rights and riparian water rights downstream of conveyance intakes.

RECREATION AND ACCESS

The <u>Sacramento-San Joaquin</u> Delta is a unique geographic region which provides opportunities for water-oriented recreation, such as boating, and resource-oriented recreation, such as fishing and hunting. Many of the users are residents of communities in the Secondary Zone and beyond; some are local residents. Boaters come from the greater Bay Area and from other parts of the State to visit the Delta. Many visitors come from out of the area and rent houseboats from local marinas. There are no current studies which document for the entire Delta, the number of recreational users, length of visit, dollars spent per visitor day, age, sex or ethnic background of visitors, or type of facilities needed to meet present and future visitor needs.

Navigational waterways in the Delta-Suisun are available for public access and make up the majority of recreational opportunities. Boating use totals more than 6.4 million visitor days annually, composed of 2.13 million annual boat trips in the larger Delta-Suisun area. In 1998, people were estimated to have spent about \$378 million for Delta-oriented boating and fishing recreation. The majority of the land within the Delta is privately owned, which reduces the availability of land-based recreation.

Many value the recreational opportunities in the Delta because the area is so different from the surrounding urbanized areas. Wide expanses of open land, interlaced waterways, historic towns, and the feeling of a slower pace of life make the Delta attractive to many visitors. The area provides unique scenic opportunities. An estimated 7,000 sandhill cranes make Delta agricultural fields their seasonal home.

The newly created Aquatic Recreation Component of the Delta Recreation Strategy Plan prepared by the Delta Protection Commission forecasts demand for boating recreation through 2020 and identifies a deficit of facilities based on current inventory and trends in increasing local population. The plan predicts a 27 percent increase in annual boating visitor days from 6.4 million to 8.1 million. Current facilities and businesses cannot accommodate this increased demand.

Senate Bill 1556, signed by the Governor in September 2006, creates a California Delta Trail and requires the Delta Protection Commission to create a plan for designing, constructing, and maintaining this trail. The California Delta Trail will be a bike and pedestrian trail system and recreation corridor along more than 1,000 miles of Delta waterfront in Contra Costa, San Joaquin, Sacramento, Yolo, and Solano counties. The trail will connect with the 450-mile San Francisco Bay Trail and will provide more land access to the Delta. The trail could increase demand for Delta-related land-based facilities like campsites, picnic areas, and restrooms.

Most of the recreation facilities within the Delta are provided through private marinas. Several thousand boat berths are located in the Primary Zone, almost equally divided between Contra Costa, Sacramento, and San Joaquin Counties. Private facilities also provide launching facilities, RV and tent camping, picnicking, restaurants, and bait and tackle shops. Waterskiing and riding Personal Water Craft (PWC)* are popular water-oriented activities.

Public parks are limited in number. There are five fishing access/launching facilities owned by Department of Fish and Game and managed by Sacramento and Yolo Counties. San Joaquin County provides land and water access at Westgate Park. Brannan Island State Park-Recreation Area provides: boat launching; camping; swimming; nature interpretation; and wind surfing.

Hunting occurs mainly on private lands and clubs; some hunting is allowed on State-owned lands and water areas. Facilities for Delta residents are located in the towns and at local schools. Locally-sponsored festivals in Isleton, Walnut Grove, and Courtland bring visitors into the Delta during the summer months.

Most of the Delta land areas are privately owned and used for agriculture. Some recreational users abuse private lands by littering, trespassing, picking fruit or vegetables from the fields, vandalizing pumps or other farm equipment, hunting or fishing in violation of State laws, or by driving on unpaved levee roads not suitable for automobile use.

Bank fishing is a popular Delta activity with few formal support facilities. The fisherman park alongside and on public and private roads, occasionally creating a safety hazard. Virtually no garbage or restroom facilities are available.

Concerns have been raised that boating activities create vessel wakes that damage levees, and that boating and PWC activity disturbs wildlife living in the sloughs and waterways. There is no regulation of the number of vessels using the Delta waterways and there is concern that some areas of the Delta have reached maximum capacity for some water-oriented recreational activities. For example, quiet boat fishing does not mix with PWC activity or waterskiing.

Protection of public safety and compliance with boating and fish and game laws are carried out by peace officers in a number of agencies including Coast Guard, State Department of Parks and Recreation, State Department of Fish and Game, and County Sheriffs' Marine Patrols (see page 50). Due to financial cutbacks, most County marine patrol programs have been reduced.

New recreational facilities could be provided at low cost on publicly-owned land where those lands will be supervised. Examples include: pedestrian access on publicly-owned levees adjacent to Brannan Island State Recreation Area; construction of new visitor facilities, interpretive facilities and trails at the proposed- Stone Lake National Wildlife Refuge; and pedestrian trails, visitor facilities, and facilities to allow access from the water to the land at the-Delta Meadows ProjectRiver-Park.

As local governments authorize new or remodeled private commercial recreation facilities, use of appropriate design can minimize conflicts between Delta user groups and provide stronger identity for Delta facilities.

*"Personal Water Craft" (PWC) is the general term for a broad range of small, powered boats that typically carry one or two persons, and are popularly known by registered tradenames such as Jet Ski, Ski Doo, etc.

Goal

To promote continued recreational use of the land and waters of the <u>Sacramento-San Joaquin</u> Delta; to ensure that needed facilities that allow such uses are constructed, maintained, and supervised; to protect landowners from unauthorized recreational uses on private lands; and to maximize dwindling public funds for recreation by promoting public-private partnerships and multiple use of Delta lands.

Policies

P-1. Ensure that plans are developed and funds are allocated for ongoing maintenance and supervision of existing public recreation areas. Where public funds are limited, local governments shall promote maintenance and supervision of existing public recreation areas over construction of new public facilities.

- P-2. To minimize impacts to agriculture and to wildlife habitat, local governments shall encourage expansion of existing private water-oriented commercial recreational facilities and eover construction of new facilities. Local governments shall ensure any new recreational facilities will be adequately supervised and maintained, appropriate access is provided, and agriculture and wildlife habitat are not adversely affected.
- P-3. Local governments shall dDevelop siting criteria for recreation projects which will ensure minimal adverse impacts on: agricultural land uses, levees, and public drinking water supply intakes, and identified sensitive wetland and habitat funding and citing criteria for establishing new recration areas.
- P-4. Funding criteria should ensure adequate funding for recreational project development and long-term maintenance and supervision. Siting criteria should ensure adequate public access and minimal adverse impacts on: agricultural land uses, levees, and public drinking water supply intakes, and identified wetlands, habitat and other sensitive areas.
- P-5. Encourage new regional recreational opportunities, such as Delta-wide trails. Also, encourage opportunities for water trails and related amenities Local governments shall improve public safety on Delta waterways through enforcement of local, State, and federal laws.
- P-56. Local governments shall eEncourage provision of publicly funded amenities in or adjacent to and which complement private facilities, particularly if the private facility will agree to supervise and manage the facility (fishing pier, overlook, picnic area) thus lowering the long-term cost to the public.
- P-67. Local governments shall sSupport multiple uses of Delta agricultural lands, such as seasonal use for hunting, or improved parking and access sites
- P-78. Local governments shall sSupport improved access for bank fishing along State highways and county roads where safe and adequate parking, policing, garbage cleanup, sanitation facilities, and fire suppression can be provided and where with acquisition of proper rights-of-access have been acquired from the landowner. Adequate policing, garbage cleanup, sanitation facilities, and fire suppression for such access shall be provided.
- P-82. <u>INew, renovated, or expanded marinas shall include adequate restrooms</u>, pumpout facilities, trash containers, oily waste disposal facilities, and other facilities necessary to meet <u>the</u> needs of marina <u>patrons and tenants for any new, renovated, or expanded marinas</u>. <u>Use fees may be charged for the use of these facilities but such fees shall not exceed the cost of maintenance</u>.
- •P-910. Local governments shall encourage new recreation facilities that take advantage of the Delta's unique characteristics.
- Encourage the development of funding and implementation strategies by appropriate governing bodies to remove abandoned vessels from county waterways to avoid pollution of Delta water and remove hazards to navigation.
- P-11. Promote and encourage Delta-wide communication, coordination, and collaboration on boating and waterway-related programs including but not limited to the removal of abandoned vessels, invasive species, clean boating, and emergency response in the Delta.

LEVEES

The Delta is the natural drain for a watershed that includes the Central Valley and the western slope of the Sierra Nevada from Fresno to Mount Shasta. Existing flood management and water supply facilities (dams, levees, and bypasses) throughout the watershed influence floodflows to the Delta. Settlers began to farm the rich lands of the Delta by the 1850s. They built low levees to allow land to be drained for farming. Few of these levees were built using modern engineering techniques, and many rest on peat foundations that have settled with the added weight. The levees have been periodically widened and raised to keep pace with subsidence on Delta islands.

The main flood management facilities in the Delta include the approximately 1,100 miles of levees and the Yolo Bypass. The Yolo Bypass, with about 500,000 cubic feet per second (cfs) capacity, was designed to flood occasionally to relieve high water stages on the Sacramento River. Easements held by the State Reclamation Board provide the right to inundate the land, including some islands such as Liberty Island, with floodwaters. The lower Sacramento and the Stockton ship channels provide some flood-carrying capability. Dredging to enlarge Delta channels used to be an important element of flood management.

Because the Delta is an estuary with land below sea level, water exerts pressure against the levees. Therefore, levees can fail for various reasons, including increased water pressure caused by island subsidence, the burrowing activities of animals, long-term erosion (from high flow events, wind-induced waves, and boat wakes), deferred maintenance, seepage through sand layers underlying levee foundations, and other causes not yet well understood.

Delta levees face risk of high water overtopping during the wet season (winter and spring), particularly when large storms coincide with high tides. Storms contribute to the levee overtopping risk by increasing water levels in the rivers and creating wind-induced waves. In addition, the low barometric pressures associated with large storms raise water surface levels in Delta and Suisun Marsh channels. The levees generally do not provide 100-year flood protection to the adjacent lands. In many cases, the flooding of the islands has been costly to local residents and farmers and to the state as a whole.

The California Department of Water Resources (DWR) has primary responsibility for flood management throughout the Central Valley on "project levees" that are part of an authorized federal flood control project. More than 700 miles, or 65 percent, of Delta levees are classified as "non-project" because they are not part of an authorized federal flood control project. These levees have been built and maintained by landowners or reclamation districts to protect agricultural lands. Frequently, they are not as durable as the project levees.

In general, the levee work by reclamation districts is financed by the owners of the lands within the levees. Over the last 30 years, the State of California has provided supplemental financing for levee maintenance and emergency response through DWR's Flood Control Subventions Program. State law requires that the levee work be consistent with net long-term habitat improvement with net benefits to aquatic species in the Delta. In addition, DWR provides technical assistance to reclamation districts and coordinates flood fights when islands are threatened. Funding for these programs has been intermittent and unreliable.

Constructed levees are the key physical element which create and maintain the Delta as we know it today, allowing draining of the low-lying lands for agriculture. The levees protect human life and existing structures from flooding, define channels used for commercial navigation, create the Yolo Bypass, part of a regional flood control project, protect the upland habitat areas on the islands, and protect Delta water quality.

Largely due to subsidence, the failure of levees would result in flooded areas of substantial depths. Flood levels of fifteen (15) to twenty (20) feet can be expected at some locations. Due to wind and boat wave action, even the levee remnants and the habitat thereon will be eroded away as a result of a levee failure. Inundated areas will be similar to the areas known as Franks Tract and Mildred Island but with greater water depths. When levees in the Delta fail, there is a tremendous loss of wildlife habitat within the particular area flooded and the habitat remaining on the levee remnants is gradually eroded away. In addition to habitat losses, there is generally a significant loss of crops and destruction of farm equipment and farm buildings.

There are also other impacts associated with levee failures in the Delta including, but not limited to, severe alteration of the aquatic habitat that should also be recognized and noted. The levees surrounding the eight western islands have been determined to be of significance in maintaining the efficiency of salinity repulsion. Without such levee systems in place, greater amounts of freshwater will be required to provide comparable levels of salinity repulsion. When an island floods, due to the higher evaporation rate of flooded areas, more freshwater is lost to the atmosphere than would be used had the island been farmed. The result is an additional loss of about two acre feet per acre per year. This freshwater loss could be very significant if broad areas of the Delta were permanently flooded.

The levees were originally built by individual landowners to provide flood control. Later, reclamation districts were created which allowed the landowners in an area to assess themselves to build levees which benefited the group as a whole. These levees were not built to a common standard and are called "non-project levees" or "local levees". "Project levees" or "federal levees" were designed and built by a federal agency as part of a flood control or shipping channel project and are maintained by the State or a local agency. Some locally constructed levees were subsequently adopted as federal levees.

Different standards have been adopted in the past regarding the growth and removal of vegetation on the levees. The construction-oriented agencies support vegetation control to allow maximum surveillance of the levees. Wildlife agencies promote growth of riparian vegetation to provide wildlife habitat. Agencies have recently adopted a new common standard.

While early levees were built to different heights and cross-sections, programs now require that non-project (local) levees at least meet the State's Flood Hazard Mitigation Plan standards to be eligible for federal financial assistance in case of a flood. The standard requires a levee crown elevation one foot above the 100 year flood elevation. In addition, to be eligible for Corps assistance in a Presidentially-declared Delta emergency, levees must meet or be able to show attempts to meet the PL-99 standard. The PL-99 Standard requires a levee crown elevation 1.5 feet above the 100 year flood elevation.

Most levees were constructed from materials dredged from low-lying edges of islands, or adjacent channels. Emergency levee repairs have required importation of large amounts of riprap and other materials. Due to current concerns about the impacts of clamshell dredging on endangered fish species and water quality, dredging for levee maintenance has slowed. Other sources of material for levee maintenance are borrowed from island deposits or imported into the Delta.

Until the late 1970's, a significant portion of levee construction and maintenance costs were borne by the landowners. Under conditions, special funds from both State and federal programs provided assistance in

emergencies. The State currently provides some funds for levee maintenance of non-project (local) levees. The State's current program, SB 34, is slated to sunset in 1999 and the monies in the program have varied from year to year. To continue high levels of levee maintenance, funds from multiple sources should be earmarked for a new or continued, permanent levee maintenance program. In addition, funds should be earmarked and set aside for emergency levee repairs and reclamation of flooded islands, perhaps in an infrastructure bank.

Levee maintenance work is regulated by multiple State and federal agencies. The regulatory authority and mission of the agencies is overlapping and in some situations contradictory. The length of time required and the amount of specialized information needed to obtain permits adds a considerable amount to the per mile cost of levee maintenance. The levee maintenance work is critical to maintain water quality in the Delta, to protect life and property, and to protect upland wildlife habitat. Emergency floodfight is coordinated by Department of Water Resources (DWR) and the reclamation districts. In an emergency, DWR can help provide labor and other resources. After a levee break, the reclamation district must coordinate with federal agencies to receive assistance for levee repair and dewatering.

Many Delta levees are built upon materials that would be inherently unstable in the case of a seismic event. Although no Delta island has flooded as the result of seismic activity, Delta levees could suffer major damage in the event of a large earthquake.

The maintenance of Delta levees is necessary to protect human life, to provide flood protection, to protect private and public property, to protect historic structures and communities, to protect riparian and upland habitat, to promote interstate and intrastate commerce, to protect water quality in the State and federal water projects, and to protect recreational use of the Delta area. Therefore, Delta levee maintenance and rehabilitation needs to be given priority over other uses of the levee areas.

Goal

Support the improvement, emergency repair, and long-term maintenance of Sacramento-San Joaquin Delta levees by coordinating permit reviews and guidelines for levee maintenance. Develop a long-term funding program for levee maintenance. Protect levees in emergency situations. Give ILevee rehabilitation, emergency repair, and long-term maintenance shall have the priority over other uses of levee areas. Encourage adaptive implementation of levee improvements to address varying conditions associated with climate change. Protect the Delta land form by making cost-effective levee investments in order to preserve the economy and character of the Delta, to the maximum extent feasible.

Policies

P-1. Local governments shall ensure that Delta levees are maintained to protect human life, to provide flood protection, to protect private and public property, to protect historic structures and communities, to protect riparian and upland habitat, to promote interstate and intrastate commerce, to protect water quality in the State and federal water projects, and to protect recreational use of the Delta area. Delta levee maintenance and rehabilitation shall be given priority over other uses of the levee areas. To the extent levee integrity is not jeopardized, other uses, including support of vegetation for wildlife habitat, shall be allowed.

•P-2. If levee guidelines are needed, local governments shall adhere to guidelines for federal and local levee maintenance and construction at a minimum as stipulated in the Flood Hazard Mitigation Plan guidelines developed by California Office of Emergency Services and the Federal Emergency Management Agency in the 1987 agreement, and set longer term goals of meeting Public Law 84-99

(Emergency Rehabilitation of Flood Control Works or Federally Authorized Coastal Protection Works), standards administered by the Corps of Engineers. If vegetation standards are needed, local governments shall adopt the adopted vegetation guidelines, which promote native grasses and limited vegetation on specific areas of the levee.

- P-31. Through flood ordinances based on Flood Emergency Management Act model ordinances, developed by the International Conference of Building Officials and included in the Uniform Building Code, Appropriate governing bodies local governments shall carefully and prudently carry out their responsibilities to regulate new construction within flood hazard areas to protect public health, safety, and welfare. These responsibilities shall be carried out consistent with currently applicable regulations concerning the Delta1. Increased flood protection shall not result in densities beyond those allowed under zoning and general plan designations in place on January 1, 1992, for lands in the Primary Zone.
- P-42. Local governments shall e<u>Supportnsure that existing</u> programs for emergency levee repairs should be strengthened and better coordinated between local, State, and federal governments. The programs and shall include: interagency agreements and coordination; definition of an emergency; designation of emergency funds; emergency contracting procedures; emergency permitting procedures; and other necessary elements.
- P-53. Local governments shall uSupport efforts to addresse their authority to control levee encroachments that are detrimental to levee maintenance.
- P-4. Support funding assistance for small urban communities within the Delta to attain 200-year levee standards.
- P-5. Support using Public Law (PL) 84-99 (33 USC Section 701), administered by the U.S. Army Corps of Engineers, as a minimum design standard for levees.
- P-6. Support stockpiling rock in the Delta, including in the western Delta, for levee emergency response.
- P-7. Support a multi-year funding commitment to restore non-project levees and levees outside the State Plan of Flood Control.
- P-8. Support and advocate for the Delta Long-Term Management Strategy (LTMS) and the beneficial use of dredged material for levee rehabilitation.
- P-9. Seek funding for and support programs to make cost-effective levee investments in order to preserve the economy and character of the Delta, to the maximum extent feasible.

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¹ These regulations currently include AB 5 (2007 Chapter 366), SB 17 (Chapter 365), AB 70 (Chapter 367), AB 156 (Chapter 368), SB 5 (Chapter 364), an AB 162 (Chapter 369).

III IMPLEMENTATION

The Delta Protection Act of 1992 established the Delta Protection Commission, a new-State entity to plan for and to guide the conservation and enhancement of the natural resources of the Delta, while sustaining agriculture and meeting increased recreational demand. The Act defines a Primary Zone, which comprises the principal jurisdiction of the Delta Protection Commission. The Secondary Zone is the area outside the Primary Zone and within the "Legal Delta"; the Secondary Zone is not within the planning area of the Delta Protection Commission. The Act requires the Commission to prepare and adopt a Land Use and Resource Management Plan for the Delta, which must meet specific goals.

For purposes of implementation issues, the Commission's duties may be characterized as including planning, conservation, and coordinating functions. The Act provides broad authority to the Commission to plan for the stated legislative goals of maintaining agricultural lands and natural resources in the Delta, while increasing recreation opportunities and public access.

In order to achieve these important goals, as measured against current baseline conditions, the Legislature has determined that local plans and decisions must be in conformance with the Commission's Plan and local decisions will be subject to appellate review by the Commission. The use of and consistently applied policies, subject to administrative review for conformance with the Act and Plan, will be helpful in achieving the goals of orderly and balanced conservation and development of Delta resources.

In view of the "sunset" clause in the Delta Protection Act, as to options for agency structure, the Commission may consider whether to recommend continuing in its current form, continuing in a revised form, and/or forming a separate or companion agency, such as a Conservancy or a resource conservation district, and/or let the "sunset" clause take effect.

Options available to the Commission to achieve the goals set forth in the Delta Protection Act of 1992 include:

A regional database with baseline conditions and a resource management plan with sufficiently specific standards and criteria in order to measure change, to evaluate progress, and to prepare the required annual reports to the Legislature.

A continuing planning effort, including review of local General Plan proposals, preparation of Plan updates, and consideration of future General Plan amendments in order to assure an effective, accurate, and dynamic resource management plan.

Continuing oversight of local development approvals as a means of assuring consistent implementation of the Commission's Plan, a function currently served by the Commission's appellate review duties.

An acquisition and management strategy for the voluntary acquisition of appropriate interests (conservation easements) in real property and for efficient management and economical support for related agricultural activities and habitat protection.

Coordination of the activities of various State and local agencies and non-profit organizations to provide an integrated stewardship scheme for Delta resources, to coordinate marina patrol activities, and to provide a database to facilitate resource protection, recreational uses, and sustained agricultural activity in the Delta.

From these many options that are available, numerous combinations are possible. In addition to the various elements of the Commission's Plan, the Commission could create partnerships with existing agencies and organizations, or the formation of new entities, would be helpful in achieving the goals of the Act. The Commission may recommend strengthening its planning and review functions, or emphasizing conservancy functions, or both. The Commission's recommendations can inform legislative consideration and review of the Act, which will be prompted by its "sunset clause".

A. Description of Local Government Responsibilities under the Delta Protection Act of 1992.

1. Prepare and Submit Local Plan. Within 180 days of the adoption of the regional plan, all local governments shall submit to the Commission proposed amendments which will cause their General Plans for the areas in the Primary Zone to be consistent with the criteria in Section 29763.5 (see below)(Section 29763).

The local governments can adopt the language in the Commission adopted Plan as a special area plan for the Delta area of the County, the local governments can identify which policies in their existing General Plans carry out the policies in the Commission adopted plan, or can prepare and submit a special area plan of their own for the Delta area of the County.

The Commission's adopted Plan is intended to be used as a guide to the local governments to ensure that certain policy areas are addressed within each local government General Plan and to ensure that uniform policies are adopted Deltawide for certain policy areas.

The local governments must ensure that when adopted, the General Plans, and any development approved or proposed that is consistent with the General Plan, will be consistent with the regional plan and will not (Section 29763.5):

- result in wetland or riparian loss;
- result in degradation of water quality;
- result in increased nonpoint source pollution;
- result in the degradation or reduction of Pacific Flyway habitat;
- result in reduced public access, provided the access does not infringe on private property rights;
- expose the public to increased flood hazard;
- adversely impact agricultural lands or increase the potential for vandalism, trespass, or the creation of public private nuisance on public or private land;
- result in the degradation or impairment of levee integrity;
- result in increased requirements or restrictions upon agricultural practices in the Primary Zone.

These are also the criteria the Commission will use to evaluate the plans submitted by the local governments.

2. Amend Local Government General Plans. Upon approval by the Commission of the proposed General Plan amendments of the local governments, the local governments shall adopt the proposed General Plan amendments within 120 days of that approval.

The Delta Protection Act amends Section 21080.22 of the Public Resources Code to exempt the "activities and approvals by a local government necessary for the preparation of General Plan amendments" from the California Environmental Quality Act.

- 3. Local Government Implementation of the Act. Prior to adoption of the General Plan amendments, local governments that approve developments in the Primary Zone must adopt a series of findings that the development will not result in:
 - wetland or riparian loss;
 - degradation of water quality;
 - increased nonpoint source pollution or soil erosion, including subsidence or sedimentation;
 - degradation or reduction of Pacific Flyway habitat;
 - reduced public access, provided that access does not infringe upon private property rights;
 - expose the public to increased flood hazards;
 - adversely impacts agricultural lands or increase the potential for vandalism, trespass, or the creation of public or private nuisances on private or public lands;
 - degradation or impairment of levee integrity;
 - adversely impact navigation;
 - any increased requirements or restriction upon agricultural practices in the primary zone.

After the General Plan amendments are adopted, the local governments will approve development in the Primary Zone based on the amended General Plans.

B. Description of Delta Protection Commission Responsibilities under the Delta Protection Act of 1992.

- 1. Adopt Regional Plan for the Delta Primary Zone. The Commission must prepare and adopt, and thereafter review and maintain a comprehensive, long-term resource management plan for land uses within the Primary Zone of the Delta by October 1, 1994 (Section 29706(a)).
- 2. Review and Act on Proposed Local Government General Plan Amendments. The Commission shall act on the proposed General Plan amendments submitted by local governments within 60 days of receiving the proposed amendments. The criteria for approving the proposed General Plan amendments are described in A-1, above. The findings must be written, and based on substantial evidence in the record (Section 29763.5).
- 3. Meet California Environmental Quality Act (CEQA) Requirements. The Commission must meet CEQA requirements when it approves the General Plan amendments prepared and submitted by local governments (Section 21080.22).

- 4. Maintain Appeal Authority. As set out in Section 29770 of the Act, the Commission currently has and will continue for the term of the legislation, to have appeal authority for "any person aggrieved by any action taken by a local government in implementing the regional plan or otherwise taken pursuant to this division". The Commission has adopted regulations governing such appeals. If an appeal is accepted, the local action is suspended until the Commission completes its review of the appealed matter. Upon remand, the local agency may modify the permit or approval and resubmit the matter for review to the Commission. The permit or approval shall not be effective until the Commission adopts written findings based on substantial evidence in the record that the permit or approval is consistent with the regional plan and the approved local General Plan.
- 5. Sunset. "Sunset" provision was deleted (2000).

C. Development of Long-Term Implementation of Goals of Delta Protection Act of 1992

- 1.Study Alternatives for Long Term Implementation. The Commission should consider holding a workshop and public hearing on the "tool box" of alternatives described in the Background Report on Implementation, prepared for the Commission by the Attorney General's office. The ranges of alternatives set out in the report include: sunset, extension of the existing legislation, creation of a different commission with a mission to carry out the goals of the original act, and other alternatives.
- 1. Prepare Goals for New Legislation. If the Commission develops concepts for future legislation, adopt materials to forward to the Governor and the Legislature. Legislation to eliminate the sunset date was chaptered September 19, 2000.

D. Recommendations

- 1. Establish the <u>updated</u> Delta Plan as the regionwide policy to preserve, protect, enhance, and restore Delta resources. Because the Delta is a unique and valuable resource area in which all the people of the State have a substantial and continuing interest, and because the wise use, conservation and enhancement of the Delta natural resources are of great concern to the people of California, it should be the policy of the State to recognize, preserve, protect and, where possible, enhance the resources of the Delta for the use and enjoyment of current and future generations.
- 2. Ensure the actions of the five Delta Counties, and other local governments proposed work in the Primary Zone, are consistent with the updated Delta Plan. The local governments are charged with regulatory authority in the Delta. Those regulatory responsibilities should be carried out in conformity with the updated Delta Plan. Should Cities propose to expand into the Delta Primary Zone, or acquire land in the Primary Zone for utility or infrastructure facility development, those actions should be carried out in conformity with the Delta Protection Act of 1992.
- 3. Continue to give the local governments with jurisdiction in the Delta Primary Zone responsibility for carrying out the <u>updated</u> Delta Plan through an amended County General Plan. Once the <u>updated</u> Plan has been adopted and the local governments have reviewed their General Plans for consistency with the <u>updated</u> Plan and amended the General Plans, the local governments should have primary responsibility for carrying out the <u>updated</u> Delta Plan.
- 4. Continue limited State responsibility for carrying out the <u>updated</u> Delta Plan through the appeal authority of the Delta Protection Commission. The Delta Protection Commission should continue to exercise its appeal authority over local government activities as delineated in the Delta Protection Act of 1992.

5. Develop a monitoring data base to review progress in achieving the objectives of the Delta Protection Act of 1992. The data base will provide information needed to evaluate the effectiveness of the regional plan in preserving agricultural lands, restoring Delta habitat, improving levee protection and water quality, and providing increased public access and recreational opportunities. This information must be provided to the Governor and Legislature as part of the annual reports which https://paper.com/have-been required to-must-be-submitted-since-starting-January 1, 1995.